

In accordance with 37 CFR §1.121, please substitute for original claims 18, 22 and 23, the following rewritten versions of the claims, as amended. The changes are shown explicitly in the attached "Version with Markings to Show Changes Made."

18. (Amended) A method of modulating a biological activity, comprising administering to a mammal a neuroactive peptide in an amount effective for modulating neuronal activity that mediates said biological activity, wherein said neuroactive peptide comprises the amino acid sequence:

D<sup>1</sup> Leu-Val-Val-Tyr-Pro-Trp-Thr-Gln-Arg-Phe, (SEQ ID NO:1),

and wherein said biological activity is selected from the group consisting of modifying learning, modifying behaviour, increase in stereotypic behaviour, facilitating memory retrieval, neurite modeling and alleviation of the effects of spinal cord injury.

22. (Amended) The method of claim 18, wherein said mammal is at risk of developing a disease or condition associated with abnormality in said biological activity, said abnormality being mediated by abnormality of said neuronal activity.

D<sup>2</sup> 23. (Amended) The method of claim 18, wherein said peptide is administered in an amount effective for treating a disease or condition associated with abnormality in said biological activity, said abnormality being mediated by abnormality of said neuronal activity.

26. (Amended) The method of claim 23, wherein the peptide is administered by inhalation.

D<sup>3</sup> 27. (Amended) The method of claim 23, wherein the peptide is administered intracerebrally.

D<sup>4</sup> 28. (New) The method according to claim 23, wherein said disease or condition is selected from the group consisting of dementia; Alzheimer's disease; neurodegenerative disorders involving one or more of cholinergic pathways, motor pathways, or sensory pathways; motor neuron disease; sensory peripheral neuropathies; motor

peripheral neuropathies; brain injury; and spinal cord injury resulting from one or more of trauma, hypoxia, and vascular disease.

29. (New) A method according to claim 18, wherein said neuro-active peptide additionally has vasoactive effects, dilates cerebral arteries, or increases renal blood flow.

30. (New) A method according to claim 18, wherein said neuroactive peptide comprises one or more D-amino acids.

31. (New) A method according to claim 23, wherein said neuroactive peptide comprises one or more D-amino acids.

32. (New) A method according to claim 18, wherein said neuroactive peptide comprises one or more non-naturally occurring amino acids, and/or amino acid analogues.

33. (New) A method according to claim 23, in which the neuroactive peptide comprises one or more non-naturally occurring amino acids, and/or amino acid analogues.

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